

Inventor: Criscione, et al.
Title: Gripper Devices

Abstract

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2 Apparatuses and methods of picking up items from a first location and selectively
3 releasing those items at one of multiple desired second locations are provided in which an item is
4 either pierced, clamped, or stuck to a gripper without using vacuum pressure to maintain the
5 grasp between the item and the pickup device. In several embodiments the items are grasped by
6 piercing probes such as an expandable needle, a barbed needle or a screw. In other embodiments
7 the items are clamped by tweezers or a gear and fingers combination. In a final embodiment, an
8 item is grasped by being frozen to a temperature controllable surface.